Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems	)	ET Docket No. 00-258
Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile Satellite Service	)	ET Docket No. 95-18
The Establishment of Policies and Service Rules for the Mobile-Satellite Service in the 2 GHz Band	)	IB Docket No. 99-81
Petition for Rule Making of the Wireless Information Networks Forum Concerning the Unlicensed Personal Communications Service	)	RM-9498
Petition for Rule Making of UTStarcom, Inc., Concerning the Unlicensed Personal Communications Service	)	RM 10024

To: The Commission

COMMENTS OF
IRIDIUM SATELLITE LLC

Iridium Satellite LLC ("New Iridium") hereby comments on the Further Notice of Proposed Rulemaking ("3G Further Notice") issued in the above-captioned proceeding.[1] As the Commission is aware, New Iridium is the proposed transferee (through various affiliates) of:

(1) the license for the existing Iridium "Big LEO" mobile satellite service ("MSS") system

[1] FCC 01-224, released August 20, 2001.

operating in the 1.6 GHz band (the "Iridium System");[2] and (2) the license issued on July 17, 2001,[3] for a new MSS system to operate in the 2 GHz band.[4]

The 3G Further Notice raises a host of potential reallocation scenarios involving the transfer of spectrum from the 2 GHz mobile satellite service ("MSS") band to terrestrial use. These alternatives range from rescinding the 2 GHz MSS licenses granted in July of this year and reallocating the entire 2 GHz MSS band -- a wholly irrational and unwarranted plan -- to leaving terrestrial systems without any access to the 2 GHz MSS band -- an equally irrational and unwarranted outcome.

One problem (there are many) with the rationale proferred by the proponents of the "total reallocation" scenario is their claim that this spectrum is "critical" to facilitate the roll-out of "3G" services. That is exactly what many, if not all, of the 2 GHz MSS licensees plan to provide. To the extent that the public interest is served by providing spectrum for 3G services, the Commission already has done so. It would be flatly contrary to the public interest to rescind the 2 GHz MSS licenses granted three months ago and reallocate that spectrum.

There is a fairly simple solution to the questions raised in the 3G Further Notice regarding the fate of the 2 GHz MSS band, a solution that does not disturb existing 2 GHz MSS proposals or the ability of those systems, over time, to gain access to the spectrum reserved by the Commission when the MSS licenses were awarded.[5] As explained in greater detail in New Iridium's comments filed today in IB Docket No. 01-185 (a copy of which is attached hereto and

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2 See Public Notice Report No. SAT-00070, released April 17, 2001.

3 See Iridium LLC, DA 01-1636, released July 17, 2001.

4 See Public Notice, Report No. SAT-00086, released September 28, 2001.

5 See, e.g., Iridium LLC, DA 01-1636, released July 17, 2001, at ¶ 7.

incorporated herein by reference), the Commission should establish a secondary terrestrial service ("STS") allocation in all MSS bands.

This allocation would be open to all applicants, whether affiliated with an MSS licensee or not. Strict technical limits would have to be imposed on the terrestrial operations to ensure that they do not cause interference to the primary MSS systems. The STS licenses should encompass sufficient bandwidth to enable the terrestrial operator to "work around" co-channel satellite systems. New Iridium believes that this provides a win-win solution for satellite and terrestrial proponents, and, most importantly, the public.

CONCLUSION

As a result of the foregoing, New Iridium requests that, with respect to the 2 GHz MSS band, the Commission adopt the STS allocation plan proposed in New Iridium's Comments in IB Docket No. 01-185.

Respectfully submitted,

IRIDIUM SATELLITE LLC

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October 22, 2001

ATTACHMENT

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Flexibility for Delivery of Communications	)	IB Docket No. 01-185
by Mobile Satellite Service Providers	)	
in the 2 GHz Band, the L-Band, and the	)	
1.6/2.4 GHz Band	)	
	)	
Amendment of Section 2.106 of the	)	ET Docket No. 95-18
Commission's Rules to Allocate Spectrum at	)	
2 GHz for Use by the Mobile Satellite Service	)	

To: The Commission

COMMENTS OF
IRIDIUM SATELLITE LLC

Iridium Satellite LLC ("New Iridium") hereby comments on the Notice of Proposed Rulemaking ("NPRM") issued in the above-captioned proceeding.[1] As the Commission is aware, New Iridium is the proposed transferee (through various affiliates) of: (1) the license for the existing Iridium "Big LEO" mobile satellite service ("MSS") system operating in the 1.6 GHz band (the "Iridium System");[2] and (2) the license issued on July 17, 2001,[3] for a new MSS system to operate in the 2 GHz band.[4]

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1 FCC 01-225, released August 17, 2001.

2 See Public Notice Report No. SAT-00070, released April 17, 2001.

3 See Iridium LLC, DA 01-1636, released July 17, 2001.

4 See Public Notice, Report No. SAT-00086, released September 28, 2001.

I. INTRODUCTION

The requests filed by New ICO Communications (Holdings), Ltd. ("ICO") and Motient Services, Inc. ("Motient"), which gave rise to the instant proceeding,[5] have superficial appeal. All things being equal, it makes sense to afford MSS licensees the flexibility needed to better serve their customers and enhance their competitive posture, by permitting them to use their licensed spectrum to provide ancillary terrestrial services ("ATS").

But all things are not equal. As is discussed infra, there is enormous disparity in the general allocations and individual spectrum assignments among MSS operators in the L-band, 1.6/2.4 GHz band and 2 GHz band. However, even if those inequalities could be eliminated today, adoption of ICO's proposal for the 2 GHz band would not result in the public benefits proffered by ICO. Rather, the end result most likely would be the effective monopolization of the 2 GHz MSS band, and the de facto reallocation of that spectrum for terrestrial use, by ICO and its affiliate, Nextel Communications ("Nextel").

If ICO's proposal (or some close variation on that theme) is adopted, the Commission will all but ensure that few, if any, of the recently authorized 2 GHz MSS systems will ever be built. Without an existing terrestrial infrastructure and customer base (such as is possessed by Nextel) or a business plan targeting a separate market niche (and supported by deep corporate "pockets"), it is all but inconceivable that funding will be available for new MSS entrants. Potential investors will view the financial "lure" of these new entrants' ability to provide terrestrial services as wholly illusory. A successful 2 GHz MSS/ATS business plan will have to attract not only the capital to build and launch a satellite system, but to build out a terrestrial network infrastructure as well, including the development of, inter alia, dual-mode

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[5] See NPRM at ¶ 5.

handsets to operate in this new band. It is unclear why any rational investor would seek to compete against Nextel's entrenched position in this market.

Rather, potential investors will see the ICO proposal as exactly what it is: an opportunity for ICO/Nextel and no one else. Nextel will be able to acquire perhaps 50 MHz (or more) of highly valuable nationwide spectrum for its existing terrestrial network -- spectrum that will enable it to achieve a nationwide terrestrial "footprint" -- without having to compete for that spectrum at auction.[6] It will be far less expensive for ICO/Nextel to build and launch a satellite system, and operate it in some minimalist fashion (but still compliant with whatever regulations the Commission imposes on ATS operations), than it would be to compete for that spectrum at auction against other major terrestrial competitors. Giving Nextel the ability to leverage its unique incumbent terrestrial status -- to essentially monopolize the 2 GHz MSS band -- will guarantee both ICO's success (albeit perhaps not as an MSS operator) and the stillbirth of most, if not all, of its would-be competitors.

Such an outcome cannot possibly be squared with the public interest. There is, however, a solution to the problem, one that should increase the service offerings available to the public, increase the likelihood of funding for 2 GHz MSS systems, and avoid the likelihood of, de facto, awarding 50 MHz of nationwide terrestrial spectrum to ICO/Nextel for free. As is discussed in greater detail below, the solution is to create a secondary terrestrial service ("STS") allocation across all the MSS bands. In each band, multiple STS frequency blocks could be created, which would be open to all applicants, whether affiliated with an MSS licensee or not, and which would be awarded by auction in the event of mutually exclusive applications.

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[6] Those potential investors with a sense of history will see this as a variation on Fleetcall's (Nextel's original name) scheme that converted private SMR spectrum to CMRS spectrum without the inconvenience of competing applications.

II. THE BIG LEO SYSTEMS OPERATING IN THE 1.6/2.4 GHZ BAND MUST BE AFFORDED THE SAME FLEXIBILITY AS OTHER MSS SYSTEMS.

Iridium wishes to emphasize that it is not essential to the success of the Iridium System that MSS licensees be permitted to offer ancillary terrestrial services ("ATS") of the sort discussed in the NPRM. However, assuming arguendo that the Commission finds that it is in the public interest that MSS licensees be permitted to provide ATS, possessing that regulatory flexibility then becomes critical for all MSS licensees. In that case, the Commission must ensure a level playing field for all MSS licensees, and permit the 1.6/2.4 GHz Big LEO MSS systems, such as Iridium, to provide such services.

However, as discussed in greater detail infra, competitive parity involves not only the ability, under the applicable regulatory scheme, to offer certain services, but also access to sufficient spectrum to do so. Otherwise, the "equal opportunity" for all MSS systems to provide ATS is rendered meaningless. As the Commission is aware, the existing Iridium System is required to operate both its uplink and downlink in a contiguous band of only 5.15 MHz (1621.35-1626.5 MHz). New Iridium has no doubt that, as a purely technical matter, it can operate a terrestrial signal within the existing TDMA allocation without causing interference to its satellite signal. The larger question is whether this can be accomplished in a commercially viable manner. As soon as the pending assignment of the Iridium Big LEO license is granted, New Iridium intends to seek an experimental license to pursue this matter in a more technically rigorous fashion.[7]

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[7] In the Report and Order that established the Big LEO allocations, in recognition of the severe constraints imposed only on the TDMA portion of that allocation, the Commission held out the prospect of spectrum relief for TDMA operations. See Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626.5/2483.5-2500 MHz Band, 9 FCC Rcd 5936, 5954-61 (1994). The time is fast

III. THE COMMISSION SHOULD CREATE A SECONDARY TERRESTRIAL ALLOCATION IN THE MSS BANDS, OPEN TO ALL INTERESTED APPLICANTS.

The inequality with respect to access to spectrum among licensees in the L-band, the 1.6/2.4 GHz band, and the 2 GHz band is self-evident, and greatly affects even the provision of solely satellite-based services; as noted supra, redress for this problem is critical. The addition of ATS authority for MSS systems, at least along the lines proposed by ICO, will increase the impact of this inequality by orders of magnitude.

This problem is separate and distinct from the problem identified in Section I above: that adoption of ICO's ATS proposal will result in the unjust enrichment of ICO/Nextel and the de facto reallocation of the 2 GHz MSS band to terrestrial use. Fortunately, however, there is a solution which: (1) provides, for MSS licensees who deem it necessary, the flexibility to offer terrestrial services; (2) avoids exacerbating the inequality among various MSS allocations and assignments; and (3) decreases, although it does not entirely eliminate, the enormous competitive advantage already held by ICO/Nextel. The solution is to create an STS allocation in the MSS bands, open to all applicants, including MSS licensees.

As discussed in Section I above, the greatest potential danger to the public interest extant in this proceeding is the possibility that ICO/Nextel, through the guise of "saving" the MSS, will be able to appropriate for its existing terrestrial network 50 MHz or so of free nationwide spectrum. In doing so, ICO/Nextel will: (1) seriously disadvantage its terrestrial competitors, who generally must pay a hefty price for their spectrum at auction; (2) create an MSS/terrestrial juggernaut, against which no new MSS entrant may be able to compete; (3) deprive the U.S. Treasury of much needed revenue; and (4) make a mockery of the

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approaching when such relief will be necessary and appropriate. Permitting MSS systems to provide ATS will only heighten the need for such relief.

Commission's allocation process. New Iridium's STS proposal addresses each of these concerns.

Obviously, great care must be exercised in fashioning the technical rules that would govern this new STS. MSS licensees must have a high degree of comfort that their satellite services will not receive interference from co-channel terrestrial operations. The burden of noninterference must reside exclusively on the STS licensee. To the extent that the STS licensee is affiliated with the MSS licensee, the services can more easily be coordinated.

In order to provide adequate spectrum for STS operations -- including enabling the terrestrial licensee to be able to "work around" a given MSS system -- STS licenses should cover more than the bandwidth of one individual MSS system. For example, at 2 GHz, each secondary terrestrial license could cover two 7 MHz (3.5/3.5) satellite licenses. This would give the terrestrial operator 14 MHz of spectrum, including significant "upstream/downstream" separation, which should provide adequate flexibility to avoid interference to the primary MSS systems, even if both MSS systems are operational.[8] Similarly, in the Big LEO band, two STS licenses could be made available, each covering 8.25 MHz in the 1.6 GHz band and 8.25 MHz in the 2.4 GHz band.[9]

Such a solution has several regulatory and commercial virtues. First, as discussed in greater detail below, it eliminates the ability or incentive of an MSS licensee to "game" the

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[8] As the Commission is aware, not all licensed systems are built, and those that are do not use all of their bandwidth on day one; spectrum use expands with the customer base. This "ramping up" period will afford the STS licensee time to work out the more difficult technical details.

[9] It may be the case that certain MSS constellations are easier to coordinate with than others. Applicants would be able to take this into account in deciding which STS license(s) to seek. Additional factors would include whether an operating MSS system already was deployed in

system. If an MSS licensee feels the need to provide terrestrial service as a "component" of its satellite offerings, it would be free to acquire the necessary terrestrial license. Indeed, a new MSS licensee may wish to offer terrestrial services as a "precursor" to its MSS system, in order to establish a customer base and revenue stream during the construction of the satellite system. It would be free to do so under this regime.

Further, the STS solution satisfies many of the concerns raised in the Memorandum Opinion and Order and Further Notice of Proposed Rulemaking in ET Docket Nos. 00-258 et al. ("3G Further Notice"),[10] regarding identifying additional spectrum for terrestrial 3G services. The STS solution maximizes the efficiency with which the spectrum will be used, consistent with the primary MSS allocation, by permitting terrestrial operators access to the MSS bands. The STS licensees may choose to partner with one or more MSS operators, in order to facilitate coordination and expand the scope of their service (e.g., a domestic cellular operator could partner with a primary MSS operator to offer seamless global service).[11]

Finally, the STS solution eliminates the spectre facing the Commission of having to police MSS systems to ensure that they are not effecting a de facto reallocation of their MSS assignments. Much of the NPRM is dedicated to proposing a series of regulatory firewalls to prevent this, including a complex set of requirements involving, inter alia, deployment of a "full"

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a particular band, or the likelihood of a new system entering service in a given timeframe. The Commission would not have to concern itself with these marketplace factors.

[10] Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Services, FCC 01-224, released August 20, 2001.

[11] The proponents of a complete reallocation of the 2 GHz MSS band continue to press the view that only terrestrial systems will provide 3G services. Nothing could be further from the truth. The vast majority of 2 GHz MSS licensees hope to offer the same suite of advanced services as their terrestrial competitors. The STS solution will encourage joint ventures that give terrestrial operators global reach.

satellite constellation, minimum geographic satellite coverage, minimum satellite traffic loading, and the like.[12]

Putting aside the administrative resources that the Commission would have to expend enforcing such a system, no combination of restraints will prevent a given MSS licensee with a substantial incentive and capability to maximize its terrestrial service offerings from doing so. As noted supra, it is clearly in ICO/Nextel's long-term economic interests to spend a few billion dollars constructing, launching and operating a minimalist MSS constellation in order to gain free access to $30-40 billion worth of nationwide spectrum for the expansion of Nextel's existing terrestrial network. As a practical matter, the ICO satellite system will be ancillary to the Nextel terrestrial network, regulatory constraints to the contrary notwithstanding.

The STS alternative eliminates many of these problems without increasing the Commission's administrative burdens. It provides the flexibility for MSS licensees who want to provide terrestrial service, without further disadvantaging those MSS licensees whose capacity already is more limited than others. It provides access to the band for terrestrial operators without threatening the future of the MSS. It enhances the likelihood that new MSS entrants will be funded and that partnerships will be created to provide global 3G services via integrated satellite/terrestrial systems. In short, it is a win-win solution for all: MSS licensees, terrestrial operators, the Commission, and, most importantly, the public.

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[12] See, e.g., NPRM at ¶¶ 41-78.

CONCLUSION

As a result of the foregoing, New Iridium requests that the Commission adopt the STS solution.

Respectfully submitted,

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October 22, 2001

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Comments of Iridium Satellite LCC was served this 22nd day of October, 2001, by hand delivery to the FCC mail facility, Capitol Heights, MD, on the following:

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